

REMARKS

Summary

The claims have been either canceled or amended to overcome the rejections under 35 U.S.C. § 112, first and second paragraphs, and the rejection under 35 U.S.C. § 103. Therefore, the application is now in allowable form.

Status of the claims

Claims 1-8 and 13 are pending. Claims 9-12 and 14 have been canceled without prejudice. Claims 1-8 and 13 have been amended to improve their form and/or to overcome substantive and/or formal rejections. Claims 1 and 13 are independent.

Requested action

Applicants respectfully request the Examiner to reconsider and withdraw the outstanding rejections in view of the foregoing amendments and the following remarks.

Information Disclosure Statement

Applicants respectfully request that the Examiner consider the patents listed in the attached Information Disclosure Statement and initial and return the attached Information Disclosure Citation form. The required fee is also enclosed.

Drawing amendments

Applicants have amended Figures 2 and 20-22 to change "13e" to --13z--, to distinguish the support hole and the suspension hole denoted in these figures as "13e" from the joggle "13e" shown in Figure 7.

Applicants have also amended Figures 4, 5, 7, 9, 16, 18, and 30 to delete reference characters not discussed in the specification, and Applicants have amended Figure 27 to delete both occurrences of "(24a)", because these reference characters are also not discussed in the specification.

In addition, Applicants have amended Figures 10 and 11 to change "21a" to --21e--, to correct a typographical error, and Applicants have amended Figure 27 to change "111d" to --111c--, to correct a typographical error.

Corrected formal drawings of these figures are also enclosed.

Formal rejections

Claims 1-14 are rejected under 35 U.S.C. § 112, first paragraph, Claims 1, 9, 13, and 14 are objected to under 37 C.F.R. § 1.75(d), and Claims 4 and 9-14 are further rejected under 35 U.S.C. § 112, second paragraph.

In response, while not conceding the propriety of the objection and rejections, Claims 9-12 and 14 have been canceled without prejudice and independent Claims 1 and 13 have been amended. Applicants submit that as amended, these claims now even more clearly satisfy 35 U.S.C. § 112, first and second paragraphs, and 37 C.F.R. § 1.75(d).

More specifically with respect to the rejection under 35 U.S.C. § 112, first paragraph, Applicants submit that as amended, the rotational-direction and rotation-moment features of independent Claims 1 and 13 are supported by the specification, for example, at least by page 56, line 21 through page 62, line 14 and page 75, line 22 through page 78, line 10 of the specification.

With respect to the rejection 35 U.S.C. § 112, second paragraph, Claims 9-12 and 14 have been canceled without prejudice, and Claims 4 and 13 have been amended to address the points raised by the Examiner.

With respect to the objection under 37 C.F.R. § 1.75(d), Applicants have amended the remaining independent claims, Claims 1 and 13, to recite a developer moving member, which corresponds but is not limited to the developer stirring members 113, 114, and 123, which clearly move the developer as discussed in the specification.

Substantive rejection

Claims 1, 2, 3/2/1, 4-6, and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,424,811 (Tsuda, et al.) in view of U.S. Patent No. 6,081,676 (Inomata).

Response to substantive rejection

In response, while not conceding the propriety of the rejection, independent Claims 1 and 13 have been amended. Applicants submit that as amended, these claims are allowable for the following reasons.

Amended Claim 1 relates to a process cartridge detachably mountable to a main assembly of an electrophotographic image forming apparatus. The process cartridge comprises an electrophotographic photosensitive drum, a developing member configured and positioned to develop an electrostatic latent image formed on the electrophotographic photosensitive drum, a developer accommodating portion configured and positioned to accommodate a developer to be used for development of the electrostatic latent image by the developing member, a developer moving member for moving the developer accommodated in the developer accommodating portion toward the developing member, and a cartridge positioning portion configured and positioned to engage a main assembly positioning portion provided in the main assembly of the apparatus to position the process cartridge relative to the main assembly of the apparatus.

The cartridge positioning portion is disposed at a developer-accommodating-portion side of the cartridge with respect to a direction crossing a direction of an axis of the electrophotographic photosensitive drum.

The cartridge also comprises a photosensitive drum driving force receiving portion configured and positioned to receive a driving force for rotating the electrophotographic photosensitive drum from the main assembly of the apparatus when the process cartridge is mounted to the main assembly of the apparatus. The photosensitive drum driving force receiving portion is provided on one end of the photosensitive drum and is disposed at a leading side with respect to a direction of mounting the process cartridge to the main assembly of the apparatus. The photosensitive drum driving force receiving portion includes a twisted prism having a substantially triangular cross-section which is engageable

with a twisted recess having a substantially triangular cross-section and provided in the main assembly of the apparatus.

The process cartridge is mounted to the main assembly of apparatus in the direction of the axis of the electrophotographic photosensitive drum.

The process cartridge also comprises a moving member driving force receiving portion configured and positioned to receive a driving force for rotating the developer moving member from the main assembly of the apparatus when the process cartridge is mounted to the main assembly of the apparatus. The moving member driving force receiving portion is disposed at the leading side of the cartridge with respect to the direction of mounting the process cartridge to the main assembly of the apparatus. The moving member driving force receiving portion is operatively engageable with a driving force transmitting member provided in the main assembly of the apparatus irrespective of any eccentricity relative to the driving force transmitting member. The rotational directions of the photosensitive drum driving force receiving portion and the moving member driving force receiving portion when the photosensitive drum driving force receiving portion and the moving member driving force receiving portion receive driving forces from the main assembly of the apparatus, are the same. The rotation of directions are such that a rotation moment is produced so as to contact the cartridge positioning portion to the main assembly positioning portion of the apparatus. The twisted recess and the twisted prism provide a centering function relative to each other, and the moving member driving force receiving portion receives the driving force for rotating the developer moving member without preventing the centering function between the twisted recess and the twisted prism.

In contrast, the patents to Tsuda, et al. and Inomata are not understood to disclose or suggest at least the twisted-recess or twisted-prism features recited by amended Claim 1.

The failure of these references to disclose or suggest at least these features proves fatal to establishing a prima facie case of obviousness against amended Claim 1, since MPEP §2142, requires that:

To establish a prima facie case of obviousness... the prior art reference (or references when combined) must teach or suggest all the claim limitations.

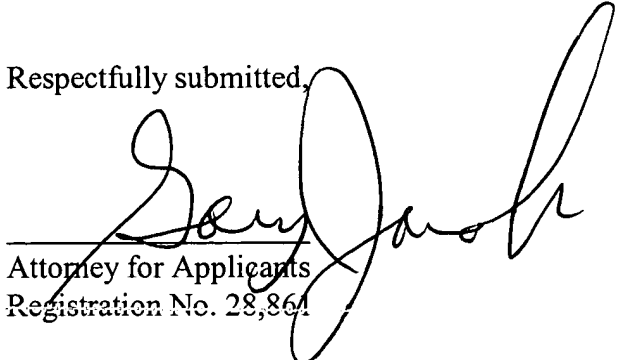
For this reason, amended Claim 1 is allowable over these patents. And since independent Claim 13 has been amended in a similar manner, it is allowable for similar reasons.

The dependent claims are allowable for the reasons given with respect to the independent claims and because they recite features which are patentable in their own right. Individual consideration of the dependent claims is respectfully solicited.

In view of the above amendments and remarks, the claims are now in allowable form. Therefore, early passage to issue is respectfully solicited.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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